

Momo Steering Wheel Upgrade
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The Momo wheel not only has cosmetic appeal but also actually improves the Hummer by extending the steering column 1 1/2 inches toward the driver and has a horn switch in a convenient place for that emergency usage.

The process starts by selecting a Momo wheel that suits your interior. Mine had two horn buttons installed on the wheel at the 3:00 and 9:00 position. You must have a Momo adapter used for Ford Trucks, part number 12112114513. This has the correct splines to match the column. The kit also comes with 6 hexagonal black recessed Allen screws to mount the steering wheel to the adapter, a rubber boot to cover the assembly and a separate metal ring with an electrical connection if you need to ground the steering wheel. In my case the horn buttons directly connected to the adapter wires that were in contact with the two horn electrical rings.

Removal of the original wheel

Phillips screws hold the plastic cover with the Hummer logo. Once removed the shaft with the single retaining nut is exposed. The nut is then removed.



The steering wheel may require a “steering wheel puller”. I bought one manufactured by Performance Tool, part number W150 for \$8.10. To use this puller, you place two bolts through the puller body and into the steering wheel, and then screw the center bolt down until very tight. If needed, a couple of rubber mallet blows to the steering wheel body will break it loose. **Watch Out.** Just pulling the wheel off by brute force without aid of a puller commonly causes broken noses and facial cuts requiring sutures, when the wheel disengages suddenly.

With the wheel off, a plate for the brush assembly placement becomes exposed. There are three predrilled holes; two to engage alignment pins on the brush assembly and one in the center for a Phillips sheet metal screw.

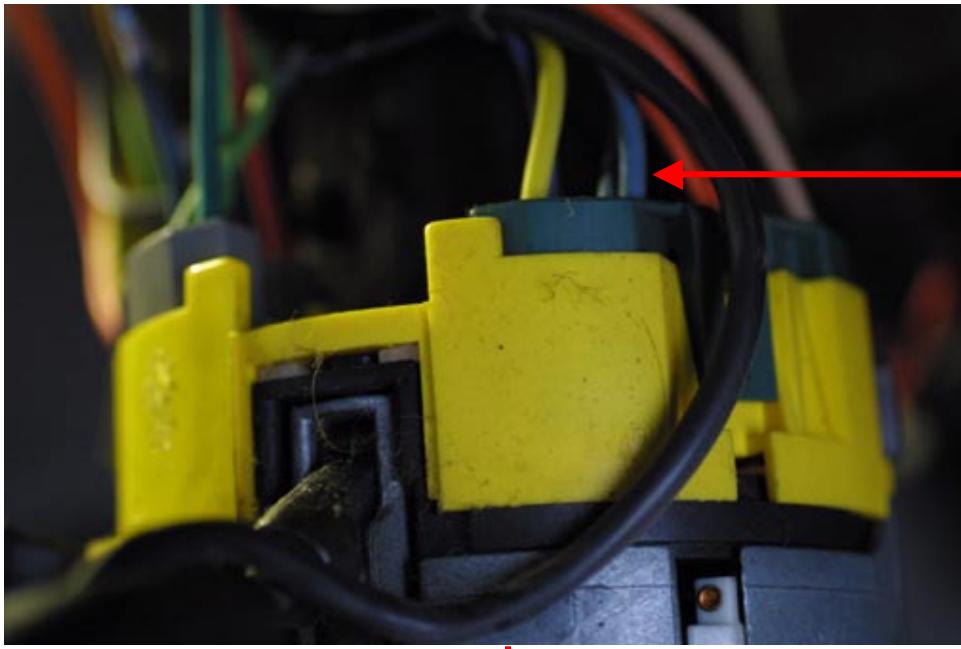
Now we remove the column plastic cover. The kick panel must be removed to gain access to lower column cover. To remove the kick panel, you remove Phillips screws on the topside and hood release lever (7/16 bolts). On the interior, you must disconnect a hose to the air duct, wires to the accessory light and screws that hold the DLC connector to this panel. After removing the kick panel, the entire steering column cover will be exposed. Remove the five long Phillips screws that hold the halves together and remove the lower half of the column cover. This exposes all the wires running to the column components.



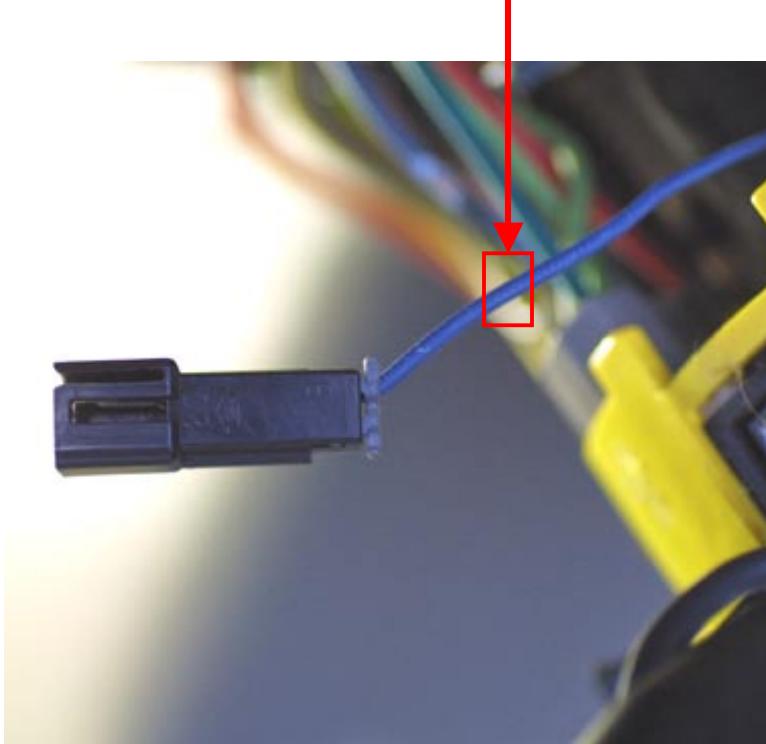
Lower column cover removed with the predrilled holes for the brush mechanism evident.

Electrical connections

The column mechanism has two multi-connectors. The lower one is the circuit for the emergency flashers, has components of the turn signal and horn circuit. **HOWEVER**, it is the upper multi-connector that has the hot horn lead. This lead is colored blue, and in the case of my 1996 Hummer had a plastic connector on it located about 5 inches lower than the column mechanism. The horn will sound if this lead is touched to ground.



The upper multi-connector has the horn hot wire. The horn will sound if this wire is touched to ground.

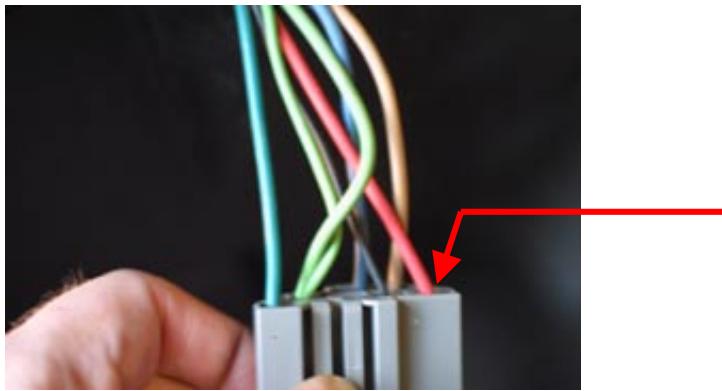


The horn hot lead has a plastic connector that connects it to two wires (black and blue). I spliced the brush mechanism hot lead to the upper portion of this plastic connector. I soldered it and then coated with liquid plastic tape.

Optional: Since I did not know which multi-connector or which wire had the hot horn lead, I was forced to drop the steering column and search. Hopefully, you will not have to do this. To drop the column, you must remove (1) the kick panel (2) CTIS control console (3) power mirror control button. This gives you access to the bolts that hold the column. The upper bolt requires a short 9/16-box open-end wrench to hold the bolt head. A flexible ratchet with a short 9/16 socket will be placed on the nut. The ratchet handle

will be placed through the CTIS opening. The box wrench held with visualization through the power mirror switch opening. After removing the nut and three washers, the bolt is pushed and pulled out from the column mechanism. I used a large curved needle nose pliers and the wooden handle of a hammer to accomplish this. Next loosen two $\frac{1}{2}$ inch pivot bolts. Finally, push the column downward toward the floor and slide off the upper housing to gain access to the upper multi-connector.

To search for the hot horn lead, I placed a paper clip into one alligator clip that went to a long test wire with a second alligator clip that I connected to ground. Then, I touched the paper clip into the undersurface of the multi-connector until I found the connector that sounded the horn. Once you identify the wire, splice into it with your horn brush ring hot wire, reassemble your column in reverse order.

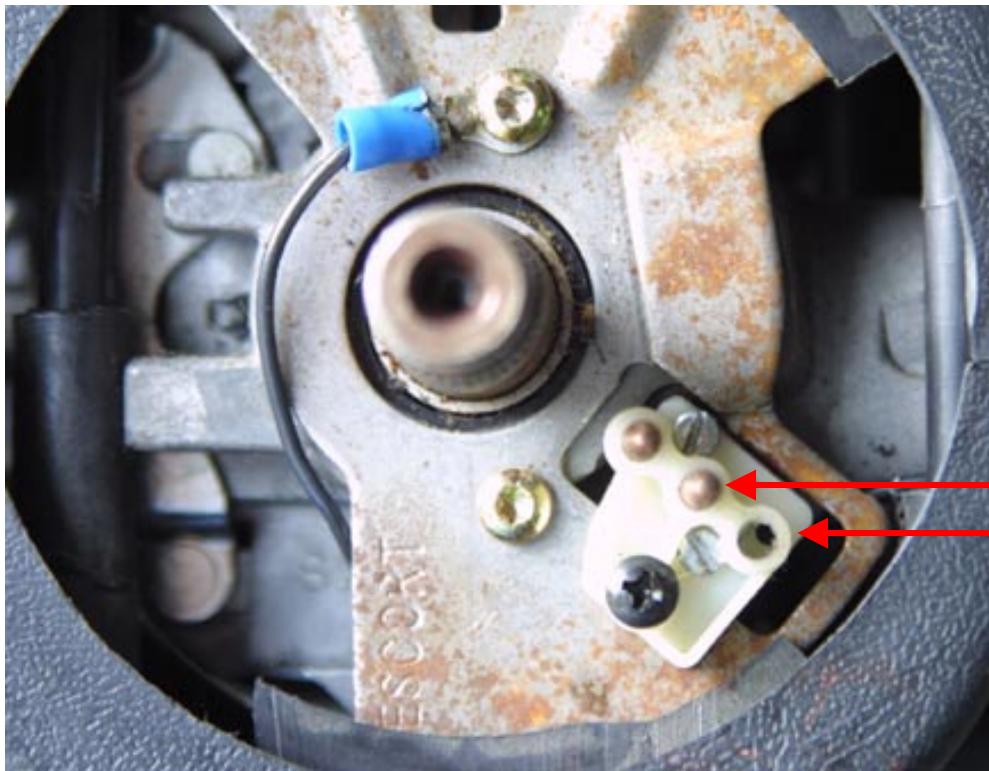


Insert the paper clip here to test the circuit.

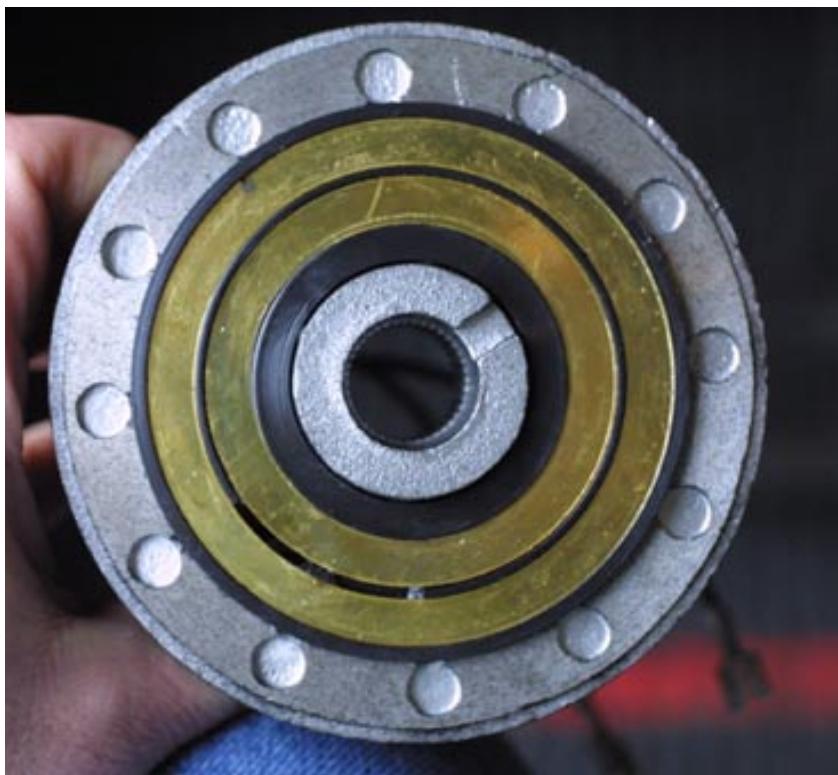
Modifying the brush mechanism

The Ford brush mechanism, part number E63Z*13A821, must be modified. As purchased, the outer brush is too far lateral to make contact with the outer ring of the Momo adapter. The inner brush is perfectly located. Luckily, there is a channel in the middle that can be converted to a new brush location.

First, cut off the electrical connector. Then, the two aluminum rivets that hold the housing together must be removed. I used a Dremmel to grind out these rivets. I then moved the outer post to the middle position. I reassembled the housing with small Phillips sheet metal screws. I then placed the reassembled brush mechanism into the plate with a Phillips sheet metal screw. The inner brush wire was then connected to this plate to serve as a ground. The outer wire was soldered to the blue hot lead previously identified in the upper multi-connector.



This is the modified brush mechanism. The arrows show the new location of the pin to the middle position.



The new pin location will now align with the Momo adapter horn contact rings.

Reassembly of the Steering Wheel

The Momo adapter is placed on the steering column. The retaining nut is placed and torqued to 35 ft-lbs. The rubber cover is placed over the Momo adapter cage. The leads from the adapter are now connected to the steering wheel horn button leads.



Finally, the steering wheel is attached to the adapter with the six Phillips recessed black screws.

The final product is shown below:



This project will take about two to three hours if you do not have to drop the column but over 6 hours if you do. I had many frustrations working in the very tight spaces in the dash when I dropped the column. My advice, use this article to identify the proper wire, splice into it and test the circuit. If you find the hot horn lead this way, you just saved yourself from allot of lost time, blood loss and frustration.

Good luck and happy Hummering!